

Obituary: Shigeru Okabe (1923–2013)

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Shigeru Okabe in 1961.

SHIGERU Okabe was born in Kagoshima and studied at the seventh high school of Japan's old education system. Then, he entered the Faculty of Science, Kyoto University. He majored in experimental nuclear physics under Professor Bunsaku Arakatsu at the Department of Physics in a handicapped environment immediately after World War II and graduated from Kyoto University in 1946. In 1949, he became an assistant professor at Tottori University. There Okabe made use of the geographical advantage that Misasa hot spring with high radon content was close there to study natural radioactivity. His study of earthquake prediction by change in the atmospheric radon concentration (Ref. 1) is internationally known as the earliest of similar studies.

In 1949, he became the Chief of Radiation Source Division, Physics Department, at the Radiation Center of Osaka Prefecture (RCOP), which was just established. There he was engaged in the construction of irradiation rooms and installation and maintenance of an electron linear accelerator with the maximum energy of 18 MeV. He also pushed forward varieties of researches such as monitoring methods of electron beams, the passage of electrons through matter, photo-nuclear reactions and characteristics of solvated electrons by the use of this accelerator. During that time, he obtained Research Grant for Peaceful Use of Nuclear Technology for six years in a row, showing his high capability of planning and advancing researches. In promoting research and maintenance work, he put the right person in the right post and also took care of the division members for getting doctor's degree or an academic position at another institution.

In 1973, Okabe was promoted to the Head of Physics Department, RCOP. Shortly thereafter, significant changes in the organization of research institutes were made by the Government of Osaka Prefecture to abolish the division system and to adopt the research

group system. This made it necessary at RCOP to have the system of working groups in parallel with research groups for the maintenance and operation of facilities and equipment. In such an upheaval, Okabe exhibited his prowess in research management. At the same time, he contributed a lot of review papers to journals in the fields of applied physics and nuclear energy, and also showed much influence on the development of Radiation Division, Japan Society of Applied Physics.

Okabe retired from the Head of Physics Department, RCOP, in 1981 and became professor at the Faculty of Engineering, Fukui University. While being engaged in education, he returned to the study of natural radioactivity. Making use of geographical advantage again, he studied radon concentrations in snow. He also played an active part in research committees, made outside the university, of exo-electron and radon.

In 1989, Okabe retired from Fukui University and established Radon Science Laboratory at his home, continuing his study intensively. In 1993, he published a book entitled *Collection of Occasional Sketches*. It contains about sixty watercolors and drawings made as a hobby from his school days. He was also known as a gourmet and often enjoyed going to good restaurants in Osaka and Kyoto.

Leaving the great achievements as described above, Okabe passed away on June 30, 2013, at the age of 89.

Note: The author is much indebted to Dr. Okabe for his kind supervision and enjoyable collaboration in the earlier years of the former's professional career. (Japanese version of this article is given [here](#).)

(Minor modifications made November 13, 2015)

Reference

1. S. Okabe, "Time variation of the atmospheric radon-content near the ground surface with relation to some geophysical phenomena." *Memoirs of the College of Science, University of Kyoto, Series A, Vol. XXVIII, No. 2, Article 1, pp. 99–115 (1956)*. (According to Google Scholar, this paper has been cited by 39 articles as of August 9, 2014.)